WILLIAM T. PECORA AWARD

DR. FRANCIS P. BRETHERTON

In recognition of his outstanding scientific achievements and focusing the efforts of agencies and scientists on the goal and the challenge of Earth System Science.

Dr. Francis P. Bretherton is an internationally recognized authority on atmospheric and oceanographic processes, and has published numerous scientific papers regarding mechanics of fluid flow, atmospheric and oceanographic phenomena, and long-term climate effects. For his scientific work, he has been honored by the Royal Meteorological Society (1970), the World Meteorological Organization (1971), and the American Meteorological Society (1972 and 1982).

In 1983, Dr. Bretherton was requested by the Advisory Council of the National Aeronautics and Space Administration to assemble a multidisciplinary committee of terrestrial and life scientists to undertake a charge of unprecedented dimensions: to review the science of the Earth as an integrated system of interacting components, to recommend a strategy for implementing global Earth studies, and to define NASA's role in such a program.

Prior to 1983, the science of the Earth as an integrated system was a neglected topic. Many scientists were concerned with understanding the complex interactions of the natural and man-made environmental factors; however, there was no program to address these scientific issues in a systematic way. Dr. Bretherton recruited scientific leaders from many fields and began the process of first defining the aims of Earth System Science and then the harder task of bringing minds together to lay the scientific foundations and scientific priorities for the subject. To achieve this end, Dr. Bretherton took on the personal responsibility of learning new fields and in the process became the intellectual leader of what was being proposed. Under the Chairman's leadership, the Committee identified those research areas to which space techniques and observations can make an outstanding contribution. It also considered the in situ activities and measurements necessary to support and complement the observations from space. The Committee soon realized that their mission extended beyond the concerns of a single agency, and through bold negotiations, won first the ear and then the real support of a broader list of agencies. In this, Dr. Bretherton took on the additional roles of scientific spokesman and interagency diplomat.

The results of his efforts, and those of the Earth System Sciences Committee which he led, now stand in a series of landmark reports--A Preview, an Overview, and a Closer View of Earth System Science--that have given substance and priorities to the Global Change Program. This important work has also given new meaning to the field of remote sensing and has placed ongoing efforts to study the Earth from space in a broader and even more challenging context.

In recognition of these continuing accomplishments, the National Aeronautics and Space Administration and the Department of the Interior take pleasure in granting the 1987 William T. Pecora Award to Dr. Francis P. Bretherton.

Donald Paul Hodel
Secretary of the Interior

Administrator, National Aeronautics
and Space Administration